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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/966,105	10/01/2001	Neil Deeman	50103-384	4780

7590 09/17/2003

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EXAMINER

VARGOT, MATHIEU D

ART UNIT	PAPER NUMBER
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1732

DATE MAILED: 09/17/2003

3

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/966,105

Applicant(s)

DEEMAN et al.

Examiner

M. VAR60T

Group Art Unit

1732

— The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- ☐ Responsive to communication(s) filed on _____
- ☐ This action is **FINAL**.
- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- ☒ Claim(s) 1-23 is/are pending in the application.
- ☐ Of the above claim(s) 23 is/are withdrawn from consideration.
- ☐ Claim(s) _____ is/are allowed.
- ☒ Claim(s) 1-22 is/are rejected.
- ☐ Claim(s) _____ is/are objected to.
- ☐ Claim(s) _____ are subject to restriction or election requirement

Application Papers

- ☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
- ☐ The drawing(s) filed on _____ is/are objected to by the Examiner
- ☐ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

- ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).
- ☐ All ☐ Some* ☐ None of the:
 - ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____
 - ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a))

*Certified copies not received: _____

Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
- ☒ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Interview Summary, PTO-413
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Other _____

Office Action Summary

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1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-22, drawn to a method of performing imprint lithography, classified in class 264, subclass 320.
 - II. Claim 23, drawn to a substrate for a hard disk magnetic recording medium, classified in class 428, subclass 156.

The inventions are distinct, each from the other because:

Inventions I and II are related as process of making and product made. The inventions are distinct if either or both of the following can be shown: (1) that the process as claimed can be used to make other and materially different product or (2) that the product as claimed can be made by another and materially different process (MPEP § 806.05(f)). In the instant case the process as claimed can be used to make other products besides the instant servo pattern in an imprintable resist on a substrate. Also, it is submitted that the product can be made by other processes, such as high temperature embossing wherein the mold and/or resist would be heated.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

During a telephone conversation with Mr. Weisstuch on October 23, 2002 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-22.

Affirmation of this election must be made by applicant in replying to this Office action. Claim 23

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has been withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

2. Applicant is requested to update the status and provide the serial number for the related application disclosed at page 1 of the specification.
3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art as disclosed at pages 2-4 and Figures 1A-1D of the instant specification in view of Shvartsman (see column 8, lines 35-55) and further in view of Greschner et al (see col. 4, lines 30-7) and D'Amato et al -111 (see col. 3, line 63 through col. 4, line 12).

Applicant admits that the basic claimed method is taught in the prior art lacking essentially the aspect of embossing at room temperature "whereby deleterious effects...are avoided".

Shvartsman discloses embossing a hologram onto a plastic resist-like film without any heating--ie, at room temperature. It is submitted that it is well known in the art that thermal mismatch between stampers (or molds) and substrates can cause stresses when the materials cool down

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together from a high temperature embossing process. In view of this, it is submitted that one of ordinary skill in the art would have been motivated to replace the heated embossing of the known prior art with a room temperature embossing as taught by Shvartsman to prevent these stresses or deleterious effects arising from the thermal mismatch. The references to Greschner et al and D'Amato et al have been additionally applied to substantiate the rejection. Greschner et al shows that it is known in the art to match the thermal expansion coefficients of a stamp and substrate material which are cooled down together upon a high temperature embossing, the reason obviously being that if not, the mismatch would cause stress or breakage of the embossed substrate. D'Amato et al discloses embossing holograms into metals at room temperature. While admittedly the reference deals with metals, the discussion concerning the relative softness of the substrate to be embossed and the stamper is what is important. Clearly, one of ordinary skill in this art knows that room temperature embossing is possible as long as the substrate is softer than the stamper. One of ordinary skill in the art certainly would have been able to pick and choose suitable resist materials based on their softness/hardness relative to the stamper and it is submitted that modifying the known prior art by embossing at room temperature when performing imprint lithography would have been obvious. The instant materials used for the support body/stamper and substrate/resist are well known in the art and would have been obvious material selections for the admitted prior art imprint lithography process for their conventionality and known properties.

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4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Vargot whose telephone number is 703 308-2621.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 308-0661.

M. Vargot

September 12, 2003

M. Vargot
MATHIEU D. VARGOT
PRIMARY EXAMINER
GROUP 1300

9/12/03